DRAINAGE INFORMATION SHEET

PROJECT TITLE: Crossland ZONE ATLAS/DRNG.FILE#: L-16/D23-F

DRB #: 97-533 EPC #: Z-97-126 WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 3A, Cavan Sunport Addition

CITY ADDRESS: 2321 International

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: John MacKenzie

ADDRESS: P.O. Box 90606 PHONE: 828-2200

OWNER: ESA Management Inc. CONTACT: John Lidbury

ADDRESS: 5495 Beltline Rd, Suite 130, Dallas PHONE: 972-726-8568

ARCHITECT: Alliance Architects CONTACT: Robert Nieporte, Jr.

ADDRESS: 12750 Merit Dr., Suite 550 LBS2, Dallas PHONE: 972-233-0400

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

X ENGINEER'S CERTIFICATION

____ OTHER

PRE-DESIGN MEETING:

____ YES

X NO

____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ S. DEV. PLAN FOR SUB'D APPROVAL

____ S. DEV. PLAN FOR BLDG PERMIT APPROVAL

____ SECTOR PLAN APPROVAL

____ FINAL PLAT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ BUILDING PERMIT APPROVAL

X CERTIFICATION OF OCCUPANCY APPROVAL

____ GRADING PERMIT APPROVAL

____ PAVING PERMIT APPROVAL

____ S.A.D. DRAINAGE REPORT

____ DRAINAGE REQUIREMENTS

____ OTHER _____ (Specify)

DATE SUBMITTED: 2/15/99

BY: John MacKenzie
John MacKenzie

RECEIVED
FEB 16 1999
HYDROLOGY SECTION

CITY OF
Albuquerque

March 18, 1998

John MacKenzie, P.E.
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199 (L-16/D23F)

RE: CROSSLAND (~~L16-D23~~). GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT, BUILDING PERMIT, AND SO #19 PERMIT APPROVALS. ENGINEER'S STAMP DATED 3-10-98.

Dear Mr. MacKenzie:

Based on the information provided on your December 15, 1997 submittal, the above referenced project is approved for Site Development Plan for Building Permit, Building Permit and SO #19 Permit.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within the City right-of-way. A copy of this approval letter mus be on hand when applying for the excavation permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill, P.E.
Hydrology

c: Arlene Portillo
Andrew Garcia
File

CITY OF ALBUQUERQUE

PUBLIC WORKS DEPARTMENT

March 18, 1998

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: Lisa Ann Manwill, P.E. Engineering Associate, PWD LAM

SUBJECT: **PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY DRAINAGE FILE NUMBER L16-D23F.**

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the SO #19 design.

This plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed off SO #19 is required by this office for Certificate of Occupancy release; therefore your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation and if you should have any questions and/or comments, please feel free to call me at 924-3984.

Attachment

FILE

DRAINAGE INFORMATION SHEET

D 23F

PROJECT TITLE: Crossland ZONE ATLAS/DRNG,FILE#: L-16

DRB #: 97-533 EPC #: Z-97-126 WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 3A, Cavan Sunport Addition

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: John MacKenzie

ADDRESS: P.O. Box 90606 PHONE: 828-2200

OWNER: ESA Management Inc. CONTACT: John Lidbury

ADDRESS: 5495 Beltline Rd, Suite 130, Dallas PHONE: 972-726-8568

ARCHITECT: Alliance Architects CONTACT: Robert Nieporte, Jr.

ADDRESS: 12750 Merit Dr., Suite 550 LBS2, Dallas PHONE: 972-233-0400

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
__X__ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
__X__ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

____ YES
__X__ NO
____ COPY PROVIDED

SD Sec'd. BP + SO#19 Approved plan Stamped 3-10-98

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
__X__ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
__X__ FOUNDATION PERMIT APPROVAL
__X__ BUILDING PERMIT APPROVAL
____ CERTIFICATION OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
__X__ OTHER SO #19 (Specify)

DATE SUBMITTED: 3/10/98

BY: John MacKenzie
John MacKenzie

RECEIVED
MAR 11 1998
HYDROLOGY SECTION

D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

March 10, 1998

Ms. Lisa Manwill, PE
Hydrology Division
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87103

Re: Crossland Hotel ~~(L16-D23)~~ with Engineer's Stamp dated 3/10/98

Dear Ms. Manwill: (L16/D23F)

Pursuant to your previous comments, dated January 9, 1998, I have modified the grading and drainage plan as follows:

1. *The finished floor elevtion has been added to the third building.* Too steep

2. *The slope of the berm along the west property line is ~~2.5:1~~ within the site. It's intended to match up with existing grade. The previously displayed access easement has been eliminated.*

3. *The previously approved Yale Business Park Master Plan was obtained and the approved discharge of 12 cfs (old hydrology) for this particular tract is less than the 10 cfs dischage that is predicted by AHYMO using "new hydrology". From the master plan the allowable discharge is not a function of land treatment types but a function of downstream capacity. Most of the capacity (if not all) in Issacson & Arfman's master plan was derived from timing of the peak flows. Relative to the primary basin within which the subject site is located, the peak from this site's subbasin was significantly ahead of the peak from the overall basin.* OK

4. *Minor off-site flow from the east (0.78 cfs, see AHYMO) of this site presently crosses the east property line and impacts this site. The off-site basin comprises an unimproved city-owned alley and back yards of lots just east of the alley. There is a drainage basin boundary running north-south approximately half-way into the residential lots, meaning the fronts of these lots discharge into the street (Cornell) upon which they front. To the block wall along the east property line has been added a note instructing the contractor to allow for these off-site flows to be received by the subject site.*

If you're not able to grant building permit approval on this submittal because there remain some outstanding issues, please consider granting conceptual plan approval (so the site plan can be signed-off) with the understanding that remaining issues will be addressed prior to release of building permit. Otherwise, if I can be of further assistance please contact me.

Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

John M. MacKenzie

John M. MacKenzie, PE

f:\cross\comments.no1

RECEIVED
MAR 11 1998
HYDROLOGY SECTION

```
    AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
         RUN DATE (MON/DAY/YR) = 03/09/1998
         START TIME (HR:MIN:SEC) = 16:39:23      USER NO.= M_GOODWN.I01
         INPUT FILE = CROSSLAN.DAT

START                  TIME=0.0

*****   HYDROGRAPH FOR CROSSLAND HOTEL IN THE YALE BUSINESS PARK
*****   ONLY DEVELOPED CONDITIONS WILL BE EVALUATED BECAUSE THE
*****   SITE IS ALLOWED FREE DISCHARGE PER MASTER PLAN BY ISSACSON
*****   & ARFMAN (L-16/D23)

RAINFALL               TYPE=1 RAIN QUARTER=0.0 IN
                       RAIN ONE=2.02 IN RAIN SIX=2.34 IN
                       RAIN DAY=2.70 IN DT=0.033 HR


                  COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 H
 DT =     .033000 HOURS          END TIME =     5.973000 HOURS
    .0000    .0014    .0028    .0043    .0058    .0073    .0089
    .0105    .0122    .0139    .0156    .0174    .0192    .0211
    .0230    .0250    .0270    .0291    .0313    .0336    .0359
    .0383    .0408    .0434    .0461    .0490    .0519    .0551
    .0583    .0618    .0654    .0704    .0762    .0824    .0909
    .1165    .1570    .2163    .2982    .4071    .5471    .7225
    .9378   1.1975   1.3137   1.3951   1.4664   1.5307   1.5898
   1.6444   1.6954   1.7431   1.7880   1.8303   1.8702   1.9080
   1.9438   1.9778   2.0100   2.0406   2.0697   2.0891   2.0951
   2.1009   2.1063   2.1115   2.1165   2.1212   2.1258   2.1301
   2.1344   2.1384   2.1424   2.1462   2.1499   2.1535   2.1570
   2.1604   2.1637   2.1670   2.1701   2.1732   2.1762   2.1791
   2.1820   2.1848   2.1876   2.1903   2.1929   2.1955   2.1981
   2.2006   2.2031   2.2055   2.2079   2.2102   2.2125   2.2148
   2.2170   2.2192   2.2214   2.2235   2.2256   2.2277   2.2297
   2.2317   2.2337   2.2357   2.2376   2.2395   2.2414   2.2433
   2.2451   2.2470   2.2488   2.2506   2.2523   2.2541   2.2558
   2.2575   2.2592   2.2609   2.2625   2.2641   2.2658   2.2674
   2.2690   2.2705   2.2721   2.2736   2.2751   2.2767   2.2782
   2.2797   2.2811   2.2826   2.2840   2.2855   2.2869   2.2883
   2.2897   2.2911   2.2925   2.2938   2.2952   2.2965   2.2979
   2.2992   2.3005   2.3018   2.3031   2.3044   2.3057   2.3069
   2.3082   2.3094   2.3107   2.3119   2.3131   2.3143   2.3155
   2.3167   2.3179   2.3191   2.3203   2.3214   2.3226   2.3238
   2.3249   2.3260   2.3272   2.3283   2.3294   2.3305   2.3316
   2.3327   2.3338   2.3349   2.3359   2.3370   2.3381   2.3391

*HYDROGRAPH FOR ON-SITE 2.24 AC DRAINAGE BASIN
*SITE WILL BE DIVIDED INTO 2 SUBBASINS

*BASIN A
COMPUTE NM HYD         ID=1 HYD NO=101.1 AREA=0.0024 SQ MI
                       PER A=0.0 PER B=15.0 PER C=0.0 PER D=85.0
                       TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =
    UNIT PEAK =    8.0540     CFS    UNIT VOLUME =     .9981         B =    526.28        P60 = 2.02
    AREA =        .002040 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000
```

```
    K =    .132208HR     TP =    .133300HR     K/TP RATIO =    .991810      SHAPE CONSTANT, N =
    UNIT PEAK =    .87683     CFS    UNIT VOLUME =     .9852         B =    324.67       P60 = 2.02
    AREA =       .000360 SQ MI     IA =     .50000 INCHES     INF =    1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000

PRINT HYD             ID=1 CODE=1

                                        PARTIAL HYDROGRAPH    101.10


    RUNOFF VOLUME =      1.90734 INCHES      =          .2441 ACRE-FEET
    PEAK DISCHARGE RATE =        6.65 CFS  AT    1.518 HOURS    BASIN AREA =    .0024 SQ. MI.



*BASIN B
COMPUTE NM HYD        ID=2 HYD NO=101.2 AREA=0.0012 SQ MI
                      PER A=0.0 PER B=15.0 PER C=0.0 PER D=85.0
                      TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =
    UNIT PEAK =    4.0270     CFS    UNIT VOLUME =     .9965         B =    526.28       P60 = 2.02
    AREA =       .001020 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000


    K =    .132208HR     TP =    .133300HR     K/TP RATIO =    .991810      SHAPE CONSTANT, N =
    UNIT PEAK =    .43841     CFS    UNIT VOLUME =     .9684         B =    324.67       P60 = 2.02
    AREA =       .000180 SQ MI     IA =     .50000 INCHES     INF =    1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000

PRINT HYD             ID=2 CODE=1

                                        PARTIAL HYDROGRAPH    101.20


    RUNOFF VOLUME =      1.90734 INCHES      =          .1221 ACRE-FEET
    PEAK DISCHARGE RATE =        3.33 CFS  AT    1.518 HOURS    BASIN AREA =    .0012 SQ. MI.



ADD HYD               ID=2 HYD NO=102.1 ID=1 ID=2
PRINT HYD             ID=2 CODE=1

                                        PARTIAL HYDROGRAPH    102.10


    RUNOFF VOLUME =      1.90718 INCHES      =          .3662 ACRE-FEET
    PEAK DISCHARGE RATE =        9.98 CFS  AT    1.518 HOURS    BASIN AREA =    .0036 SQ. MI.



*OFF-SITE BASIN 1
COMPUTE NM HYD        ID=3 HYD NO=101.3 AREA=0.0006 SQ MI
                      PER A=40.0 PER B=60.0 PER C=0.0 PER D=0.0
                      TP=0.1333 HR MASS RAINFALL=-1
```

```
    K =    .143286HR     TP =    .133300HR     K/TP RATIO =  1.074913     SHAPE CONSTANT, N =
    UNIT PEAK =   1.3700    CFS   UNIT VOLUME =     .9896        B =   304.37       P60 = 2.02
    AREA =       .000600 SQ MI     IA =     .56000 INCHES     INF =   1.41800 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000

PRINT HYD             ID=3 CODE=1

                                        PARTIAL HYDROGRAPH   101.30

    RUNOFF VOLUME =       .67181 INCHES      =         .0215 ACRE-FEET
    PEAK DISCHARGE RATE =         .78 CFS  AT   1.518 HOURS   BASIN AREA =    .0006 SQ. MI.


FINISH

NORMAL PROGRAM FINISH                END TIME (HR:MIN:SEC) = 16:39:30
```

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 9, 1998

John MacKenzie, P.E.
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

(L16/D23F)

RE: CROSSLAND (L16-D23). GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT, BUILDING PERMIT, AND FOUNDATION PERMIT. ENGINEER'S STAMP DATED 12-15-97.

Dear Mr. MacKenzie:

Based on the information provided on your December 15, 1997 submittal, City Hydrology has the following comments:

1. Provide finish floor elevation for all three proposed buildings.

2. What is the slope of the berm along the west property line? How will the access easement ever be used?

3. Provide applicable information showing allowable discharge. You may not have free discharge because the master plan you referred to used "old hydrology." Do the land treatment types you propose match those defined in the master plan?

4. Address off-site flow.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill, P.E.
Hydrology

c: Andrew Garcia
File

M E M O R A N D U M

[redacted]

to: Hydrology Reviewer
from: John MacKenzie
subject: Crossland Grading and Drainage Plan L16/D23F
date: December 15, 1997

I am seeking Site Development Plan and Building Permit Approval. If there are comments preventing building permit approval, please grant foundation permit approval so earthwork can begin while comments are in the process of being addressed.

DRAINAGE INFORMATION SHEET

D 23 F

PROJECT TITLE: Crossland ZONE ATLAS/DRNG,FILE#: L-16

DRB #: _____ EPC #: Z-97-126 WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 3A, Cavan Sunport Addition

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: John MacKenzie

ADDRESS: P.O. Box 90606 PHONE: 828-2200

OWNER: ESA Management Inc. CONTACT: John Lidbury

ADDRESS: 5495 Beltline Rd, Suite 130, Dallas PHONE: 972-726-8568

ARCHITECT: Alliance Architects CONTACT: Robert Nieporte, Jr.

ADDRESS: 12750 Merit Dr., Suite 550 LBS2, Dallas PHONE: 972-233-0400

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT

_X_ DRAINAGE PLAN

_____ CONCEPTUAL GRADING & DRAINAGE PLAN

_X_ GRADING PLAN

_____ EROSION CONTROL PLAN

_____ ENGINEER'S CERTIFICATION

_____ OTHER

PRE-DESIGN MEETING:

_____ YES

_____ NO

_____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL

_____ PRELIMINARY PLAT APPROVAL

_____ S. DEV. PLAN FOR SUB'D APPROVAL

_X_ S. DEV. PLAN FOR BLDG PERMIT APPROVAL

_____ SECTOR PLAN APPROVAL

_____ FINAL PLAT APPROVAL

_X_ FOUNDATION PERMIT APPROVAL

_X_ BUILDING PERMIT APPROVAL

_____ CERTIFICATION OF OCCUPANCY APPROVAL

_____ GRADING PERMIT APPROVAL

_____ PAVING PERMIT APPROVAL

_____ S.A.D. DRAINAGE REPORT

_____ DRAINAGE REQUIREMENTS

_____ OTHER _____ (Specify)

DATE SUBMITTED: 12·15·97

BY: John MacKenzie
John MacKenzie

D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Crossland
SUBJECT Drainage
BY JMM DATE 12/10/97
CHECKED _____ DATE _____
SHEET ____ OF ____

Discharge from Basin A is via 24" sidewalk culvert

Q = 6.65 cfs (from HH/MO) Curb Height = 8"

$L = \frac{Q}{2.9(H)^{1.5}} = \frac{6.65}{2.9(0.67)^{1.5}} = 4.18$ ft

Use 4.5 ft length

$Q_{capacity} = 2.9(4.5)(0.67)^{1.5} = 7.16$ cfs

Outfall channel is to Interpatoonal in-
6" x 24" culvert

Slope = 7% WP = 3' Area = 1 SF

$Q = \frac{1.49}{.014}(1)\left(\frac{1}{3}\right)^{0.67}(0.07)^{0.5}$

$Q_{capacity} = 13.5$ cfs - OK

```
    AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
         RUN DATE (MON/DAY/YR) = 12/10/1997
         START TIME (HR:MIN:SEC) = 09:25:29      USER NO.= M_GOODWN.I01
         INPUT FILE = CROSSLAN.DAT

START                TIME=0.0

*****   HYDROGRAPH FOR CROSSLAND HOTEL IN THE YALE BUSINESS PARK
*****   ONLY DEVELOPED CONDITIONS WILL BE EVALUATED BECAUSE THE
*****   SITE IS ALLOWED FREE DISCHARGE PER MASTER PLAN BY ISSACSON
*****   & ARFMAN (L-16/D23)

RAINFALL             TYPE=1 RAIN QUARTER=0.0 IN
                     RAIN ONE=2.02 IN RAIN SIX=2.34 IN
                     RAIN DAY=2.70 IN DT=0.033 HR


                COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 H
DT =     .033000 HOURS          END TIME =     5.973000 HOURS
   .0000   .0014   .0028   .0043   .0058   .0073   .0089
   .0105   .0122   .0139   .0156   .0174   .0192   .0211
   .0230   .0250   .0270   .0291   .0313   .0336   .0359
   .0383   .0408   .0434   .0461   .0490   .0519   .0551
   .0583   .0618   .0654   .0704   .0762   .0824   .0909
   .1165   .1570   .2163   .2982   .4071   .5471   .7225
   .9378  1.1975  1.3137  1.3951  1.4664  1.5307  1.5898
  1.6444  1.6954  1.7431  1.7880  1.8303  1.8702  1.9080
  1.9438  1.9778  2.0100  2.0406  2.0697  2.0891  2.0951
  2.1009  2.1063  2.1115  2.1165  2.1212  2.1258  2.1301
  2.1344  2.1384  2.1424  2.1462  2.1499  2.1535  2.1570
  2.1604  2.1637  2.1670  2.1701  2.1732  2.1762  2.1791
  2.1820  2.1848  2.1876  2.1903  2.1929  2.1955  2.1981
  2.2006  2.2031  2.2055  2.2079  2.2102  2.2125  2.2148
  2.2170  2.2192  2.2214  2.2235  2.2256  2.2277  2.2297
  2.2317  2.2337  2.2357  2.2376  2.2395  2.2414  2.2433
  2.2451  2.2470  2.2488  2.2506  2.2523  2.2541  2.2558
  2.2575  2.2592  2.2609  2.2625  2.2641  2.2658  2.2674
  2.2690  2.2705  2.2721  2.2736  2.2751  2.2767  2.2782
  2.2797  2.2811  2.2826  2.2840  2.2855  2.2869  2.2883
  2.2897  2.2911  2.2925  2.2938  2.2952  2.2965  2.2979
  2.2992  2.3005  2.3018  2.3031  2.3044  2.3057  2.3069
  2.3082  2.3094  2.3107  2.3119  2.3131  2.3143  2.3155
  2.3167  2.3179  2.3191  2.3203  2.3214  2.3226  2.3238
  2.3249  2.3260  2.3272  2.3283  2.3294  2.3305  2.3316
  2.3327  2.3338  2.3349  2.3359  2.3370  2.3381  2.3391

*HYDROGRAPH FOR ON-SITE 2.24 AC DRAINAGE BASIN
*SITE WILL BE DIVIDED INTO 2 SUBBASINS

*BASIN A
COMPUTE NM HYD       ID=1 HYD NO=101.1 AREA=0.0024 SQ MI
                     PER A=0.0 PER B=15.0 PER C=0.0 PER D=85.0
                     TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =
    UNIT PEAK =    8.0540     CFS    UNIT VOLUME =     .9981         B =    526.28       P60 = 2.02
    AREA =        .002040 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000
```

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    K =    .132208HR     TP =    .133300HR     K/TP RATIO =    .991810      SHAPE CONSTANT, N =
    UNIT PEAK =    .87683     CFS    UNIT VOLUME =     .9852        B =    324.67       P60 = 2.02
    AREA =       .000360 SQ MI     IA =     .50000 INCHES     INF =    1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000

PRINT HYD             ID=1 CODE=1

                                        PARTIAL HYDROGRAPH    101.10

    RUNOFF VOLUME =      1.90734 INCHES      =          .2441 ACRE-FEET
    PEAK DISCHARGE RATE =         6.65 CFS   AT    1.518 HOURS    BASIN AREA =    .0024 SQ. MI.


*BASIN B
COMPUTE NM HYD        ID=2 HYD NO=101.2 AREA=0.0012 SQ MI
                      PER A=0.0 PER B=15.0 PER C=0.0 PER D=85.0
                      TP=0.1333 HR MASS RAINFALL=-1

    K =    .072649HR     TP =    .133300HR     K/TP RATIO =    .545000      SHAPE CONSTANT, N =
    UNIT PEAK =    4.0270     CFS    UNIT VOLUME =     .9965        B =    526.28       P60 = 2.02
    AREA =       .001020 SQ MI     IA =     .10000 INCHES     INF =     .04000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000


    K =    .132208HR     TP =    .133300HR     K/TP RATIO =    .991810      SHAPE CONSTANT, N =
    UNIT PEAK =    .43841     CFS    UNIT VOLUME =     .9684        B =    324.67       P60 = 2.02
    AREA =       .000180 SQ MI     IA =     .50000 INCHES     INF =    1.25000 INCHES PER HOUR
    RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =    .033000

PRINT HYD             ID=2 CODE=1

                                        PARTIAL HYDROGRAPH    101.20

    RUNOFF VOLUME =      1.90734 INCHES      =          .1221 ACRE-FEET
    PEAK DISCHARGE RATE =         3.33 CFS   AT    1.518 HOURS    BASIN AREA =    .0012 SQ. MI.


ADD HYD               ID=2 HYD NO=102.1 ID=1 ID=2
PRINT HYD             ID=2 CODE=1

                                        PARTIAL HYDROGRAPH    102.10

    RUNOFF VOLUME =      1.90718 INCHES      =          .3662 ACRE-FEET
    PEAK DISCHARGE RATE =         9.98 CFS   AT    1.518 HOURS    BASIN AREA =    .0036 SQ. MI.


FINISH

    NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 09:25:35
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